

WHAT IS CLAIMED IS:

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1. Rubber mixtures comprising uncrosslinked, double-bond-containing rubbers (A), crosslinked rubber particles (B) and multifunctional isocyanates (C), wherein the amount of component (B) in the mixture is from 1 to 150 parts by weight and the amount of multifunctional isocyanates (C) is from 1 to 100 parts by weight, in each case based on 100 parts by weight (phr) of the rubber component (A).
2. Rubber mixtures according to Claim 1, wherein said crosslinked rubber particles (B) are present in from 5 to 100 parts by weight and said multifunctional isocyanates (C) are present in from 3 to 50 parts by weight, in each case based on 100 parts by weight of the rubber component (A).
3. Rubber mixtures according to Claim 1, wherein said crosslinked rubber particles (B) have particle diameters of from 5 to 1000 nm and swelling indices in toluene of from 1 to 15.
4. Rubber mixtures according to Claim 1, wherein said multifunctional isocyanates (C) contain isocyanates having at least two isocyanate groups in the molecule.
5. Rubber mixtures according to Claim 4, wherein said multifunctional isocyanates (C) are selected from the group consisting of hexamethylene diisocyanate, 1-isocyanato-3-(isocyanatomethyl)-3,5,5-trimethylcyclohexane, 2,4- and 2,6-diisocyanatotoluene as well as the corresponding technical isomeric mixture, diphenylmethane diisocyanates, diphenylmethane 4,4'-diisocyanate, diphenylmethane 2,4'-diisocyanate, diphenylmethane 2,2'-diisocyanate as well as the corresponding technical isomeric mixtures, naphthalene 1,5-diisocyanate and 4,4',4''-triisocyanatotriphenylmethane.

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6. Rubber mixtures according to Claim 1, wherein said uncrosslinked, double-bond-containing rubbers (A) are selected from the group consisting of natural rubber, styrene/butadiene rubber, polybutadiene rubber, nitrile rubber, butyl rubber, brominated isobutylene/isoprene copolymers having bromine contents of from 0.1 to 10 wt.%, chlorinated isobutylene/isoprene copolymers having chlorine contents of from 0.1 to 10 wt.%, hydrogenated or partially hydrogenated nitrile rubber, styrene/butadiene/acrylonitrile rubber, polychloroprene, epoxidized natural rubber or mixtures thereof, carboxylated nitrile rubbers and carboxylated styrene/butadiene copolymers.
7. Rubber mixtures according to Claim 1, wherein said crosslinked rubber particles (B) include those which have been obtained by crosslinking of the following rubbers: polybutadiene, butadiene/acrylic acid C_{1-4} -alkyl ester copolymers, polyisoprene, styrene/butadiene copolymers having styrene contents of from 1 to 60 wt.%, preferably from 5 to 50 wt.%, carboxylated styrene/butadiene copolymers, fluorine rubber, acrylate rubber, polybutadiene/acrylonitrile copolymers having acrylonitrile contents of from 5 to 60 wt.%, carboxylated nitrile rubbers, polychloroprene, isobutylene/isoprene copolymers having isoprene contents of from 0.5 to 10 wt.%, brominated isobutylene/isoprene copolymers having bromine contents of from 0.1 to 10 wt.%, chlorinated isobutylene/isoprene copolymers having chlorine contents of from 0.1 to 10 wt.%, partially and completely hydrogenated nitrile rubbers, ethylene/propylene/diene copolymers, ethylene/acrylate copolymers, ethylene/vinyl acetate copolymers, epichlorohydrin rubbers, silicone rubbers, polyester urethane polymers and polyether urethane polymers.
8. A rubber vulcanate comprising rubber mixtures, which comprise uncrosslinked, double-bond-containing rubbers (A), crosslinked rubber particles (B) and multifunctional isocyanates (C), wherein the amount of component (B) in the mixture is from 1 to 150 parts by weight and the amount of multi-

functional isocyanates (C) is from 1 to 100 parts by weight, in each case based on 100 parts by weight (phr) of the rubber component (A).

- 5 9. Molded rubber bodies comprising rubber mixtures, which comprise uncrosslinked, double-bond-containing rubbers (A), crosslinked rubber particles (B) and multifunctional isocyanates (C), wherein the amount of component (B) in the mixture is from 1 to 150 parts by weight and the amount of multifunctional isocyanates (C) is from 1 to 100 parts by weight, in each case based on 100 parts by weight (phr) of the rubber component (A).

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10. A molded rubber body according to Claim 9, wherein said molded rubber body is selected from the group consisting of cable sheaths, hoses, drive belts, conveyor belts, roller coverings, tire components, shoe soles, gaskets, damping elements and membranes.

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11. A rubber gel consisting of functional groups that are capable of reacting with isocyanates.

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12. A rubber gel according to claim 11, wherein said rubber gel has been functionalized with hydroxyl, carboxyl, amino and/or amide groups.

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